

Clinical Section

War and Tuberculosis in Canada

By

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Tuberculosis in 1914-1918

In most wars disease has taken a greater toll than wounds—bacilli have been more lethal than bullets. This applies even in wars so recent as the Boer-British and the Spanish-American. In these the death rates from typhoid fever alone was nearly 1,000 per 100,000 and the incidence at times ran to 20%. In recent wars the danger from infection has been much reduced. In the British army during the last world war the mortality from typhoid was only 8 per 100,000. Other infections have had a similar history so that with proper prophylactic precautions no great epidemics will likely be associated with modern wars.

The hazard of tuberculosis in war time had not been given much thought until recent years. In the days, not long ago, when tuberculosis was a universal infection, it is likely that war made no perceptible difference in its incidence. Even in the last world war it is not certain that tuberculosis breakdown was abnormally high in the army. Statistics about this are confusing and contradictory; like many medico-statistical studies they have a super structure of cold mathematical facts, but often are supported on a foundation of hypothesis that is anything but firm. An insurmountable difficulty lies in the fact that we have no reliable pre-war standards with which to compare war incidence. Immediately after the war the diagnosis of pulmonary-tuberculosis was revolutionized by the introduction of X-Ray. This method was readily available to all returned soldiers who were ailing. As a consequence much tuberculosis was discovered but it is not certain that there were any more cases than would have been found in a civilian group of the same age and sex had they been subjected to a similar scrutiny.

Conditions of trench warfare are commonly supposed to have been particularly favorable to the spread of tuberculosis and to its breakdown in those who were already infected; this supposition is open to some doubt. The general hygienic environment of the troops was likely as good as the average in civil life; periods of physical strain were not prolonged; the nourishment was usually adequate and most men gained weight while in service; crowding in barracks and dug-outs was not common except for short periods. There is no good evidence that gassing or chest wounds contributed to the activation of tuberculous disease. Dr. F. S. Burke has recently shown that "enlisted men suffered a death rate from disease which was a little lower than that for civilian males." (Deaths among war pensioners. Published by the Dept. of P. & N. H., 1939).

It is perhaps accurate to say that the last war was the means of discovering rather than of causing tuberculosis. During and after service the men had medical supervision and diagnostic facilities were available. As a consequence most of the tuberculosis among them has been discovered.

The extent of the tuberculous problem which has arisen from the last war may be gathered from the following figures:

Total enlistment	619,636
To England or France	424,489
Killed in action	51,678
Died during the war	6,767
Non fatal wounds and gassing	138,000
Pensioned for wounds	32,365
Tuberculosis Figures:	
Deaths (1918 to 1936)	3,607
Accepted as due to service	2,942
On pension (March, 1937)	5,602

Tuberculosis has accounted for nearly 40% of all pensioner deaths since the war and roughly 12% of those now on pension have tuberculosis. The Canadian Government has taken a most liberal view and accepts responsibility for treatment and pension in any case that appeared to originate during or soon after service. Definite figures for the total cost for this service are not available but can be estimated as not less than one hundred and fifty million. This is about equal to the amount that has been spent on treatment alone for all the other tuberculous people in Canada during the same period.

The acceptance, by the Government, of the responsibility for all tuberculosis having some time relation to service must be regarded as a compassionate gesture. It could scarcely be justified on a strictly etiological basis. Viewed from the point of view of an anti-tuberculosis campaign it is highly commendable and has been most successful. It has provided diagnosis, adequate treatment and comparative freedom from economic worry for all the tuberculous ex-service men. In order to provide beds for treatment, it became necessary soon after the war for the Dominion Government to assist various Sanatorium. About 3,000 new sanatorium beds were constructed. As the number of pensioners requiring treatment has gradually become smaller, these beds have been made available for treatment of civilians. In other respects also the intensive treatment of the army cases has given impetus to the general campaign against tuberculosis in Canada.

The Problem in the Present War

The last war and our subsequent experience have brought us to the complete realization of two important facts: First, tuberculosis is an infectious disease; second, x-ray examination is the only way of making an early diagnosis.

It is true that various astute observers have suspected the infectiousness of tuberculosis at different times during the past 3,000 years; Villemin produced convincing evidence of this hypothesis in 1862 and it has been repeatedly proven beyond doubt since the tubercle bacillus was discovered in 1882. In spite of this, it is also true to say that the full significance of contagiousness was not generally realized until recent years. It did not have the effect on practise that it should have had. It certainly was overlooked or minimized when our army was recruited. Even yet in some hospitals and some communities it appears to be disregarded for we still see open cases of tuberculosis in contact with healthy people with very little protest from health authorities.

The presence of tuberculosis carriers in our present day army would cause more harm than in the last war. This follows from the fact that the majority of our recruits have had no previous infection with tuberculosis. Judging from tuberculosis surveys it is estimated that in 1914 about 40% of the army would have been Mantoux negative, i.e., non-infected. Of the present recruits about 70% would be negative and therefore more susceptible to exogenous infection. This increase in susceptibility results from the gradual reduction in tuberculosis throughout the country. It will be a much greater hazard in the Canadian Army than in those from the older countries where infection is still quite general.

The protection of these recruits against contamination can only be affected by constant vigilance in preventing the enlistment of active cases, and in discovery of those who break down on service. This can only be done by x-ray examination. If a dependable clinical history were available in each case and if conditions for physical examination were ideal, a certain number of cases could be discovered at enlistment; but neither of these conditions prevails. Even under the best circumstances a very large proportion of cases would be missed by any medical examiner. This is simply due to the fact that only gross tuberculosis produces convincing physical signs.

Though the danger of spreading infection among the troops by an open case will be greater than in the last war, the number of cases breaking down from previous infection should be less because of their much smaller proportion. The circumstances which contribute to the reactivation of a previous healed lesion are not at all understood and as a consequence there is a plethora of theories. Some security is usually alleged to be given by general hygienic measures, e.g., proper and sufficient food, avoidance of fatigue, and prevention of inter-current infections. There is evidence that all these factors are being carefully considered in the new army.

Having realized the hazard of tuberculosis the Department of Defence has made arrangements to have a radiogram of each recruit. Whenever any abnormality is reported by the radiologist,

the man in question is given a special examination and discharged unless the lesion is definitely healed.

What Amount of Tuberculosis will be Discovered?

This is an interesting epidemiological problem. The answer will give information about the disease in Canada which will be most valuable. Before the survey was started an attempt to estimate the ultimate results was made. The line of reasoning (or guessing!) proceeded as follows:

1. The tuberculosis death rate in Canada is roughly 50 per 100,000 per year.

2. It is generally assumed that for each death there are about 5 individuals in the community with clinically active disease, i.e., 250 per 100,000.

3. But in the age group with which we are dealing, the incidence is about twice as high as the average, that is 500 per 100,000.

4. There are roughly in Canada 100 per 100,000 taking treatment. There are possibly about the same number who know they have tuberculosis and for that reason will make no effort to join. (It is to be remembered that the group under consideration are volunteers).

5. That leaves 300 per 100,000 with active disease.

6. But there are probably an equal number who have healed lesion that would be considered significant from the army point of view. This group includes those with lesions so widespread as to produce some impairment of respiratory function and those whose disease though not active is still not considered quite stable. The addition of these raises the estimated number of significant lesions to 600 per 100,000 or 0.6% of all recruits.

Results of Present Survey

The percentage of cases discovered in our new army will not be known till the Department has tabulated and released the figures. The experience in Manitoba up to the present suggests that they will be fairly close to what has been predicted above. A slightly larger figure may be expected since there will be, for precautionary reasons, a tendency to over-estimation of activity. To judge the activity of a tuberculous lesion on a single film and on one examination of the man, is difficult and often impossible; naturally there will be a variety of opinion on particular cases among various radiologists and clinicians. In civil practice one relies to a large extent on a sound history, and in doubtful cases one frequently requires a period of observation and a series of plates. In the present instance neither of these was available, and in doubtful cases the safest course for both the man and the army was adopted—that is the case was considered possibly active and rejected.

Since the death rate in Manitoba is roughly the same as that for Canada, we may anticipate a discovery of about one per cent. of significant cases. In the other provinces it will vary from

about 2% in Quebec, where we have the highest mortality, to perhaps 0.5% in Saskatchewan which has the lowest death rate in Canada.

Besides the tuberculous cases other significant lesions are being found. There will possibly be one per cent. wastage due to other pulmonary conditions, e.g., from bronchiectasis, emphysema, residual disabilities from pleurisy and empyema, and a few rare pulmonary conditions. A few cardiovascular disabilities will also be found.

The results up to date completely justify the decision of the Department to submit all recruits to x-ray examinations. We can feel confident that the new army at the outset is free from open tuberculosis. This has three obvious advantages, namely, spread of infection will not take place, enormous pensions charged will not accumulate, and also early cases of tuberculosis are being discovered and put on treatment.

Keeping the Army Free of Tuberculosis

Having enlisted an army with no open or unstable cases the next problem is to keep it free from infection. There are two possible sources of contamination.

(1) Any of the 30% who have had some tuberculous lesion (judged by the tuberculin test) might become open and infectious from reactivation of their old disease. The actual number of these will not be great, but a very few could if left at large infect a large number of negative reactors.

(2) Infection from outside sources cannot be prevented and will always produce a number of fresh cases, especially among troops at the base and on lines of communication.

The early discovery of cases that break down is imperative; otherwise the preliminary precautions that have been taken will be completely wasted. The methods by which new cases may be discovered in the army are the same as those that should be adopted in any civil community that aspires to be free of tuberculosis. In the army, where each individual is under daily medical observation, the problem should be simplified. A comprehensive plan would include the following:

(1) *Early availability of X-ray equipment.* Suspected cases should have x-ray films unless the diagnosis is obvious. Cases should be suspected on the following clinical findings: unaccountable loss of weight or fever of obscure origin; haemoptysis; pleuritic pains, persistent cough or expectoration. In the presence of any of these x-ray examination should be made at the nearest available Casualty Clearing Station or Base Hospital.

(2) A tuberculin test should be made on all negative reactors every six months; all positive reactors should have an x-ray film every six months.

(3) All cases sent into hospital with respiratory

symptoms or with obscure fever, or an unexplained disability should have films.

(4) All active cases should be put on treatment.

This may sound like a plan that is too ambitious and elaborate. But it need not be so; very little organization would be necessary. The x-ray facilities will, no doubt, be available even in the smaller and more advanced hospital units. The personnel necessary for tuberculin testing and reading plates, need not be numerous. One tuberculosis officer and a technical assistant could give this service to a whole division. It would not be necessary to disrupt the routine of the troops; they could be examined during their periods of rest from front line duty.

The expense would be relatively small. When we consider that a large percentage of cases in the last war were discovered only after they had become far advanced and that the average case has since then cost the country at least fifteen thousand dollars, the suggested expenditure is insignificant.

We know that the interest of the Federal Government since the last war has proven to be a valuable stimulus to the anti-tuberculosis work throughout Canada. In the present war there is a still greater opportunity. A revolution in the general attitude to open cases of tuberculosis is impending. Up to now we have regarded unisolated and uncontrolled open cases with strange complacency. Very few communities use stringent measures to bring them under control, such as are used against cases of smallpox. Now it is widely realized that open tuberculosis is in its final effect a greater menace than any other communicable disease. Sporadic cases represent the last points of resistance offered by this once universal infection. Their elimination will require more intense methods than have so far been necessary. To discover and bring them all under control will be difficult, but there is no doubt that it can be done and that it will be done in the near future. The next generation will look back with horror to the laxity of our methods which allowed a preventable killing disease to ravish the community, just as we in our day shudder to think of the time when leprosy was a constant menace.

Conditions of army life with its control of individuals and its opportunity for medical supervision offers an ideal opportunity to demonstrate the possibility of a tuberculosis free community. If the army authorities accept the challenge they will again be giving a lead in tuberculosis work as they have done before. The humanitarian and economic by-products of such a demonstration are obvious.

Reference

Burke, F. S. "Deaths Among War Pensioners"—Published by Department of Pensions and National Health, 1939.

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8.30 a.m. Registration.

9.00 Medical Conference.

- (1) The treatment of congestive heart failure Dr. J. M. McEachern.
- (2) The treatment of pneumonia Dr. H. D. Kitchen.
- (3) The treatment of anaemias Dr. L. G. Bell.
- (4) The treatment of acute haemorrhage from peptic ulcer Dr. J. D. Adamson.
- (5) The use of protamine zinc insulin in the treatment of diabetes Dr. A. Hollenberg.

11.00 Practical demonstration of spinal anaesthesia and the use of the newer anaesthetics Dr. D. C. Aikenhead.

2.00 p.m. The treatment of insomnia Dr. A. T. Mathers.

2.30 The treatment of leukorrhoea Dr. Brian Best.

3.00 The routine investigation of sterility Dr. W. F. Abbott.

3.30 Sulphanilamide in the treatment of genito-urinary infections.
 (1) Venereal disease Dr. K. J. Backman.
 (2) Non-specific infections Dr. H. Morse.

February 22nd

9.00 a.m. Surgical Conference.

- (1) Gastrointestinal intubation for the relief of post-operative distension and small bowel obstruction. "Clinical Demonstration" Dr. C. W. Burns.
- (2) The rationale of post-operative fluids Dr. John A. Hillsman.
- (3) Common post-operative complications and their treatment Dr. G. S. Fahrni.

February 22nd (Cont.)

- (4) The pre-operative preparation of the serious surgical risk Dr. M. R. MacCharles.
- (5) Injection treatments Dr. W. A. McElmoyle.

Communicable Diseases

2.00 p.m. Diagnosis and treatment.

- a. Diphtheria Dr. Dougald McIntyre.
 - b. Scarlet Fever Dr. Ellen Taylor.
 - c. Typhoid Fever Dr. Ton Quong.
- Prevention and control.
- a. Some general consideration of immunology Dr. Fred. Cadham.
 - b. Diphtheria Dr. C. R. Donovan.
 - c. Scarlet Fever Dr. D. S. Boulton.
 - d. Typhoid Fever Dr. W. J. Wood.
 - e. Whooping Cough Dr. Harry Medovy.

February 23rd

9.00 a.m. The treatment of abortion Dr. J. D. McQueen.
 Dr. Elinor Black.

9.30 The treatment of toxæmias of pregnancy Dr. Ross Mitchell.

10.00 The treatment of occiput posterior Dr. F. G. McGuinness.

10.30 The present status of vitamin therapy Dr. Frank White.

11.00 The treatment of epilepsy Dr. W. M. Musgrove.

11.30 The treatment of urinary frequency in the female Dr. C. R. Rice.

2.00 p.m. The use of mercurial diuretics Dr. Ormerod.

2.30 The treatment of menopausal neurosis Dr. Gilbert Adamson.

3.00 The use of vaccines and serums Dr. Fred. Cadham.

3.30 The treatment of common skin diseases Dr. A. M. Davidson.

Registration Fee - - - \$10.00

The Faculty of Medicine of the University of Manitoba will offer a course in Therapeutics with special reference to recent advances in Treatment Methods, the course to be held on February 21st, 22nd and 23rd, 1940. In addition to the program outlined below the department of Public Health on the evening of February 22nd invites all those taking the course to be its guest at dinner. Following the dinner there will be an informal discussion of the Public Health and Hospital Aid Act.

On the evening of February 23rd the entire group of post-graduate students are invited by the Winnipeg Medical Society to attend its monthly meeting in the Medical College at 8.15 p.m. The guest speaker of this occasion will be Dr. McKelvie, Professor of Gynecology and Obstetrics in the University of Minnesota.

For further information regarding the course and also for the purpose of enrollment those interested should communicate with Dr. L. G. Bell, secretary of the Post-Graduate Committee, % the Dean's Office, Medical College, Winnipeg.

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Membership in the Canadian Medical Association and Manitoba Medical Association

At the beginning of the year statements were sent out for the Canadian Medical Association and the Manitoba Medical Association to the members of the profession in Manitoba. Since the Manitoba Medical Association became federated with the Canadian Medical Association the provincial body has become responsible for the collection of all fees, and this is the reason that a joint statement has been sent out.

Under the by-laws of the federated constitution, Chapter 1, the following clause occurs:

A Branch may become a Division:—

“By agreeing to collect from all its Divisional Members who desire to be members of the Canadian Medical Association such annual fee as may from time to time be set for membership and remit same to this Association.”

Members of the profession who join both the Dominion and Provincial Associations pay \$18.00; those who join either one alone pay \$10.00.

It should be emphasized that those who wish to have their journal sent should see that their fees are paid promptly. To date the returns have been very good, and it is hoped the members of the profession will all send in their fees without delay.

All fees should be forwarded to the Manitoba Medical Office, 102 Medical Arts Building, Winnipeg.

Medical Military News

The following reports have been submitted by the Secretary of the Canadian Medical Association, and published in the December and January numbers of the Canadian Medical Association Journal. They are republished herewith for the information of the members in Manitoba.

In the last issue of the *Journal* we published an account of the progress which had been made to date in respect to the Association's relationship to the Government in medical military affairs. Here is a further progress report.

QUESTIONNAIRES

The following is a report by provinces with respect to returned questionnaires.

British Columbia	689
Alberta	425
Saskatchewan	545
Manitoba	589
Ontario	3856
Quebec	1608
New Brunswick	261
Nova Scotia	362
Prince Edward Island	40
Total	8375

A return of 8,375 questionnaires represents a response of more than 83 per cent., as approximately 10,000 were sent out. This is indeed remarkable and a very splendid tribute to the medical profession of Canada. Among other things, it demonstrates what a high percentage of the profession have accepted the opportunity afforded by the questionnaire of putting themselves on record as to where they stand or what they can do in respect to the present war. The task of classifying and coding the information is an arduous one. Progress is being made in this direction, and it is hoped in the very near future to be able to report a breakdown of the returns.

CONTACT MEN

Divisional Advisory Committees have now been established in all the Military Districts, and in each Committee one member has been named Contact Man to the D.M.O. of the District. For the information of all concerned, we present hereunder the names of the contact men of the various Military Districts. Consult the contact man in your District about any matters which you wish to bring to the attention of the local or central committees.

Military District No. 1 (Ontario South and West)

Dr. G. A. Ramsay, London

Military District No. 2 (Ontario Centre, North and South)

Dr. A. D. Kelly, Toronto

Military District No. 3 (Ontario East, including small portion of Quebec)

Dr. F. Etherington, Kingston

- Military District No. 4 (Quebec West)
Dr. F. S. Patch, Montreal
- Military District No. 5 (Quebec East)
Dr. Jas. Stevenson, Quebec
- Military District No. 6 (Nova Scotia and Prince Edward Island)
Dr. J. R. Corston, Halifax
- Military District No. 7 (New Brunswick)
Dr. R. M. Pendrigh, Saint John
- Military District No. 10 (Manitoba, including Keewatin, Kenora, Rainy River, Thunder Bay)
Dr. W. E. Campbell, Winnipeg
- Military District No. 11 (British Columbia and Yukon)
Dr. Thos. McPherson, Victoria
- Military District No. 12 (Saskatchewan)
Dr. A. W. Argue, Grenfell
- Military District No. 13 (Alberta and Mackenzie District)
Dr. A. E. Archer, Lamont
Deputies—Drs. Geo. R. Johnson, Calgary, and A. W. Macbeth, Edmonton

PART-TIME SPECIALISTS

There are a number of doctors in the different specialties in Canada who are key men in their positions and who might be used for part time military work in certain places. It would be wasteful to employ full-time specialists where part-time men would serve just as well. The Canadian Medical Advisory Committee crystallized its views with regard to this matter in the following resolution:

That this Committee approves of the principle of part-time employment in Canada by the Department of National Defence, of medical specialists engaged in a civilian capacity and remunerated in accordance with their ability and the amount of service rendered.

SELECTION AND PAY OF MEDICAL OFFICERS

Your Canadian Medical Advisory Committee, in the following resolution, sets forth its views with regard to the selection and pay of medical officers:

That, in the selection of medical officers for the Canadian Army Service Forces, medical qualifications should be the prime consideration; and that officers holding posts in charge of medicine or surgery in hospital units of the C.A.S.F. should have the rank of Lieutenant-Colonel from the date of their appointment to these posts.

PROTECTION OF POSITIONS AND APPOINTMENTS

Attention is called to the fact that, as far as possible, medical men who enlist should be protected at home as far as their positions and appointments are concerned. The Canadian Medical Advisory Committee, in the following resolution, makes a pronouncement upon this important matter:

That in the opinion of this Canadian Medical Advisory Committee every effort should be made to protect official appointments and positions vacated by doctors enlisting for military service; and that, where such positions have to be filled, it be done on a temporary basis; and that every effort be made, upon the return to civilian life of the officers concerned, to reinstate them in their former positions; and that copies of this resolution be forwarded to each of the nine Divisions with the request that the resolution be publicized in the most effective manner.

PROTECTION OF PRIVATE PRACTICES

It has been brought to the attention of the Canadian Medical Advisory Committee that some effort should be made to protect the private practices of doctors enlisting for service. The following resolution was passed:

That, whereas it has been recommended to this Committee that steps should be taken to protect the private practices of doctors enlisting for military service; and whereas this Canadian Medical Advisory Committee believes that every legitimate effort should be made to so protect members of the profession who enlist; it is recommended to each of the nine Divisions of the Association that this matter be carefully studied and that appropriate steps be taken in regard thereto.

MEMBERSHIP FEES OF DOCTORS ENLISTING FOR ACTIVE SERVICE

It was the opinion of the Committee that members of the C.M.A. who enlist for military service should be carried on our membership roll without the payment of fee during the period of their service. The following resolution was passed:

That, during the progress of the war in which Canada is now engaged, the Canadian Medical Advisory Committee recommends that the membership in the C.M.A. of doctors who proceed overseas on active service in the army, in any branch of the service, shall be continued in good standing without the payment of any fee, this to take effect at the expiration of the last calendar year for which the fee has been paid; but that, unless specifically requested by the doctor so carried, the "Journal" shall not be sent to such doctor during the period of his absence from Canada; and that a copy of this resolution be published in the "Journal" and also sent to each Division.

C.M.A. JOURNAL TO MILITARY MEDICAL UNITS

It was agreed by the Canadian Medical Advisory Committee that during the period of the present war a copy of the *C.M.A. Journal* should be sent to the officer commanding each Military Medical Unit of the Canadian Active Service Forces overseas, to take effect from January 1st, 1940.

ENLISTMENT FOR A LIMITED TIME

It was suggested to your Canadian Medical Advisory Committee that it would be advisable to approach the Government to inquire if it would be deemed feasible to allow medical men to offer their services overseas for a definite time, say six months or a year, then being permitted to return to practice, and the place vacated being taken by another doctor, also on a definite limited time basis. This subject is under discussion at the present time with the Department of National Defence.

NUTRITION

Having regard to the fact that the science of nutrition has made such rapid strides during the past twenty-five years, the value of which science should be made fully available to Canada's armed forces, your Canadian Medical Advisory Committee has recommended to the Department of National Defence that there be appointed an authority on Nutrition to see to it that the feeding

of the troops is carried out most effectively. This subject has been discussed with the Department and is now under advisement.

PAY AND ALLOWANCES FOR MEDICAL OFFICERS IN C.A.S.F.

The following rates of pay have been authorized for professionally qualified officers of the Canadian Army Medical Corps:

Colonel	\$12.50	per diem
Lieut. Colonel	11.00	" "
Major	9.25	" "
Captain	7.50	" "
Lieutenant	5.00	" "

In addition to the foregoing rates of pay officers of the C.A.M.C. will receive allowances at the same rates as officers of other arms of the service, and the officer in command of any hospital or institution in which the total personnel, including patients, under his command numbers 500 or over, or if the hospital is equipped with 500 beds or over, shall receive command pay of \$1.00 per diem.

The allowances for married officers are as follows:

Officers above the rank of Major	\$60.00	per month
Major	55.00	" "
Captain	50.00	" "
Lieutenant	45.00	" "

In addition to the above allowances for a wife, there is an allowance of \$12.00 per month for each child up to the number of two, under the age of sixteen years in the case of a boy, and seventeen years in the case of a girl.

Subsistence allowance at the rate of \$1.70 per diem is allowed for officers in Canada for whom no quarters are available.

THE RED CROSS WAR COUNCIL

The Canadian Red Cross Society has established a War Council to assist Canada's armed forces in a voluntary manner such as properly comes under the purview of the Red Cross Society. On invitation, the Canadian Medical Advisory Committee has appointed two members to this War Council in the persons of Drs. Duncan Graham and T. C. Routley, of Toronto.

DIVISION OF AUTHORITY BETWEEN THE N.M.C.C. AND DIVISIONAL COMMITTEES

The division of authority between the National Committee and the Divisional Committees has been set forth as follows:

1. That the C.M.A.C. should deal with matters of general and national interest in co-operation with the Departments of Government concerned.

2. That matters of local concern, such as the selection of personnel in a District, should be dealt with by the Divisional Advisory Committee.

3. That, in the selection of such personnel, more particularly O.C.'s of Medicine and Surgery, the

first consideration should be given to professional qualifications and experience.

4. That in case of local difficulties or misunderstandings arising within a Division which the Division does not feel disposed to settle, the matter be referred to the C.M.A.C.

5. In the event of the Divisional Advisory Committee being aware of matters of general or national interest which should be communicated to the C.M.A.C., that the Divisional Advisory Committee be requested always to take such action.

CONTINUITY

The Canadian Medical Advisory Committee is keeping in constant touch with the authorities at Ottawa and also with the National Medical Co-operative Committee and the Divisional Advisory Committees.

Watch *The Journal* each month for further details of important decisions and developments.

T. C. ROUTLEY,
General Secretary.

The Canadian Medical Association and the National Emergency

Immediately upon the outbreak of war (as a matter of fact, several days before war was declared), the Canadian Medical Association intimated to the Honourable the Prime Minister of Canada its willingness to co-operate in every possible manner coming within our sphere. In the days immediately following your officers were in close touch with members of the Government, and finally, on September 25th and 26th, the Executive Committee was called to meet in Ottawa for the purpose of crystallizing its views with regard to the part which the Association might play at this time. At the conclusion of a two-day meeting of the Executive, a proposal was made to the Government on behalf of the Association which the Honourable Minister of National Defence, Norman MacLeod Rogers, accepted. Briefly put, the Association undertook to make a complete survey of the medical profession of Canada (the particulars of which are now well known to all members of the profession in Canada) and undertook to set up Advisory Committees, national, central and provincial, which would be available to advise on matters medical arising within either the Department of National Defence or the Department of Pensions and National Health.

At this writing, we are able to announce the personnel of the committees appointed to date. They are as follows:—

THE NATIONAL MEDICAL CO-OPERATIVE COMMITTEE

Drs. T. H. Leggett, Ottawa (*Chairman*); F. S. Patch, Montreal; Duncan Graham, Toronto; Selater Lewis, Montreal; T. C. Routley, Toronto; Harvey Agnew, Toronto; A. G. Nicholls, Montreal; G. F. Strong, Vancouver; A. E. Archer, Lamont,

Alberta; A. W. Argue, Grenfell, Sask.; O. C. Trainor, Winnipeg; J. C. Gillie, Fort William; G. Stewart Cameron, Peterborough; Harris McPhedran, Toronto; A. W. Young, Montreal; Léon Gérin-Lajoie, Montreal; W. W. Lynch, Sherbrooke; W. E. Gray, Milltown; J. R. Corston, Halifax; and W. J. P. MacMillan, Charlottetown.

The Central Nucleus of the National Medical Co-Operative Committee, to be called the Canadian Medical Advisory Committee, is composed of the following:—

Drs. T. H. Leggett, Ottawa (*Chairman*); F. S. Patch, Montreal; Duncan Graham, Toronto; Léon Gérin-Lajoie, Montreal; and T. C. Routley, Toronto.

PROVINCIAL ADVISORY COMMITTEES

British Columbia—

Drs. E. Murray Blair, Vancouver; Thomas McPherson, Victoria; M. W. Thomas, Vancouver; G. F. Strong, Vancouver; G. E. Gillies, Vancouver; J. H. MacDermot, Vancouver.

Alberta—

Drs. A. E. Archer, Lamont; E. L. Pope, Edmonton; A. W. Macbeth, Edmonton; M. R. Bow, Edmonton; W. V. Lamb, Camrose; C. R. Bunn, Red Deer; E. R. Selby, Calgary; F. T. Campbell, Calgary; and Geo. R. Johnson, Calgary.

Saskatchewan—

Drs. E. A. McCusker, Regina; T. M. Leask, Moose Jaw; A. W. Argue, Grenfell; R. O. Davison, Regina; J. A. Valens, Saskatoon.

Manitoba—

Drs. W. E. Campbell, Winnipeg; O. C. Trainor, Winnipeg; F. A. Young, Winnipeg; J. A. Gunn, Winnipeg; F. W. Jackson, Winnipeg; A. T. Mathers, Winnipeg; H. D. Kitchen, Winnipeg; Geo. Clingan, Virden; J. C. Gillie, Fort William, representing that part of Ontario which is included in Medical District No. 10.

Ontario—

Drs. Harris McPhedran, Toronto; A. D. Kelly, Toronto; G. A. Ramsay, London; F. Etherington, Kingston; O. A. Cannon, Hamilton; A. B. Whytock, Niagara Falls; B. T. McGhie, Toronto.

Quebec—

Drs. F. S. Patch, Montreal; Sclater Lewis, Montreal; Léon Gérin-Lajoie, Montreal; A. W. Young, Montreal; A. T. Bazin, Montreal; J. U. Gariépy, Montreal; Albert LeSage, Montreal; Grant Fleming, Montreal.

Sub-committee for City of Quebec: Drs. James Stevenson, Quebec; Charles Vezina, Quebec; W. H. Delaney, Quebec; Jos. Vaillancourt, Quebec.

New Brunswick—

Drs. W. E. Gray, Milltown; A. S. Kirkland, Saint John; R. M. Pendrigh, Saint John; Chas. Dumont, Campbellton; A. F. VanWart, Fredericton; F. C. Jennings, Saint John; A. E. Macauley, Saint John; J. F. L. Brown, Woodstock; J. A. S. Hynes, Fredericton; H. S. Everett, St. Stephen; P. M. Atkinson, Moncton; P. C. Laporte, Edmund-

ston; C. Langis; D. C. Malcolm, Saint John; W. W. Warwick, Fredericton.

Nova Scotia—

Drs. J. R. Corston, Halifax; K. A. MacKenzie, Halifax; F. R. Davis, Halifax; P. S. Campbell, Halifax; W. L. Muir, Halifax; J. H. L. Simpson, Springhill; H. A. Creighton, Lunenburg; A. E. Blackett, New Glasgow; J. S. Brean, Mulgrave; L. M. Morton, Yarmouth; W. W. Patton, Glace Bay; L. R. Meech, North Sydney; S. G. MacKenzie, Truro; L. B. W. Braine, Annapolis Royal.

Prince Edward Island—

Drs. W. J. P. MacMillan, Charlottetown; I. J. Yeo, Charlottetown; J. F. MacNeill, Summerside; Preston McIntyre, Montague; C. H. Johnson, Summerside; E. S. Giddings, Charlottetown.

We are happy to announce that Questionnaires have been received at this date, as under-mentioned:

British Columbia	651
Alberta	425
Saskatchewan	477
Manitoba	588
Ontario	3083
Quebec	1572
New Brunswick	228
Nova Scotia	338
Prince Edward Island	40
Total	7402

It will be observed that the response has indeed been excellent although there are a number of practitioners from whom we are still waiting to hear. A follow-up Questionnaire is being sent to these and we hope before many weeks go by to have a documentation on at least 90 per cent. of the medical practitioners of Canada.

The Advisory Committees have been instructed to co-operate with the District Medical Officers in their respective Military Districts, while the central committee is keeping in close and almost constant touch with headquarters at Ottawa. To date, a number of problems which have arisen for discussion, both centrally and provincially, have been dealt with, and it is believed that the organization which has been set up is capable of rendering the fullest possible measure of service to the departments of Government, no matter what the demands of the Departments may be upon the medical profession of Canada as the war progresses.

Through the medium of the *Journal*, Provincial Bulletins, and direct communications, the profession may rest assured that they will be kept fully informed on matters of mutual concern, having regard, of course, to the necessity which will arise from time to time of certain matters being dealt with in the most confidential manner. It should be emphasized, however, that the relationship which has been established means that the organized medical profession of Canada is in a position to render to Canada the type of

(Continued on page 43)

Department of Health and Public Welfare

NEWS ITEMS

The following is an article appearing in a recent issue of "Preventive Medicine" and written by Dr. Henry Cohen:

"THE PREVENTION OF COMMON INTESTINAL DISORDERS OCCURRING IN THE FIRST YEAR OF LIFE:—In spite of the advances that have been made in Pediatrics in recent years, diarrhea still remains an important cause of death among infants. In the United States and Canada, there has been in recent years, a steady decline in infant mortality from all causes. Nevertheless, gastroenteric diseases are still responsible for over 30% of all deaths occurring in the first year of life. Therefore the prevention of intestinal disorders at this tender age is of prime importance. Should these disorders develop, their proper management may prevent serious and often fatal complications.

"A knowledge of the underlying causes of these disorders is desirable in order to institute the proper preventive measures. Speaking of the most dreaded of all diarrheas—namely, 'alimentary intoxication,' Czerny states that 'alimentary toxicosis will disappear or will be met with only seldom, when children enter the summer season in a healthy state; when the mildest disturbance of nutrition is carefully treated and corrected, and when the people are enlightened to appeal for competent medical care at the slightest appearance of nutritional disorder in children, and not to wait until severe manifestations appear. . . .'

"The ideal food for infants is mother's milk. Exceptions to this rule occur, but are rare. Infants fed exclusively on breast milk show a lower morbidity and mortality than those fed artificially, either entirely or in part. Too early weaning should therefore be discouraged as much as possible. Unfortunately, however, at the present time, comparatively few mothers are able to nurse their babies for more than three to four months, and many for even less than that. It therefore becomes necessary to seek a substitute for breast milk early in the infant's life. Though cow's milk is not a perfect substitute, it is still the best available food for infants, in the absence of mother's milk. When properly diluted and reinforced with carbohydrate, to make up for the greater amount of sugar in the breast milk, it will adequately supply the needs of the average healthy infant. From a comprehensive study of many milk mixtures upon which the vast majority of children have been known to thrive, Powers concludes that such mixtures should contain about 14 to 20% of the total calories in protein, 50 to 60% in carbohydrates, and the rest in fat. When such mixtures are made with cow's milk and suitable amounts of carbohydrate are added, the mineral supply becomes adequate. In calculating a formula, the following basic requirements, at least, should be kept in mind by the physician:

"1. Caloric requirements: A normal infant requires between 45-60 calories per pound of body weight, in 24 hours for proper growth and development. This can be calculated on the basis of one ounce of milk=20 calories and 1 ounce of sugar=120 calories.

"2. Fluid requirements in 24 hours are from 3 to 2 ounces per pound of body weight. The smaller figure is used as the child increases in age and weight.

"3. Protein requirements: During the first year, the growing infant requires from 1.5 to 2 grams of protein per pound of body weight in 24 hours. Since 1 ounce of milk contains about 1 gram of protein, we can fulfill this requirement by giving 1.5 to 2 ounces of milk per pound of body weight in 24 hours. The rest of the

fluid requirements are supplied by the addition of water.

"4. Fat requirements are not as strictly definable as those of protein. But 1.5 to 2 ounces of milk per pound of body weight will satisfy both the fat and protein needs.

"5. Sugar is added in quantity large enough to make up the difference between the caloric requirements of the infant and the number of calories derived from the milk alone.

"There are some notable exceptions to the above figures. For instance, premature infants often require as much as 100 calories or more per pound of body weight to gain properly. In the case of malnourished infants, the caloric requirements should be calculated on the basis of the infant's ideal weight, rather than on the existing weight.

"The importance of vitamins and minerals to the child's welfare has been stressed in another issue of this Journal.

ACUTE DIARRHEAL DISORDERS IN INFANCY

"The classifications of nutritional disturbances and intestinal disorders in infancy are numerous and often cumbersome. Finkelstein and Meyer classify them into (a) Dystrophy, (b) Dyspepsia, (c) Decomposition, (d) Intoxication. While this classification has academic interest, it lacks simplicity. Most acute diarrheas will fall into one of these three groups:

- I. Acute Intestinal Indigestion
- II. Alimentary Intoxication or Toxicosis
- III. Infectious Diarrhea (Ileocolitis, Dysentery)

I. ACUTE INTESTINAL INDIGESTION

"Into this group fall the less severe forms of diarrhea, unaccompanied by severe constitutional complications such as dehydration, acidosis and toxicosis. Local gastrointestinal symptoms, such as vomiting and diarrhea predominate. There is, as yet, not enough water loss to bring about dehydration.

"The importance of preventing this syndrome lies in the fact that it frequently leads to the more serious condition—toxicosis.

"What can the physician do to prevent this disorder? Here many factors should be stressed. As mentioned above, knowledge of the basic requirements of the growing infant is of prime importance. In this there should be closer co-operation between doctor and patient. The use of pasteurized milk should be insisted upon. Once the milk reaches the home, its preparation and handling before feeding it to the infant should be meticulously supervised. Proper home refrigeration and sterilization of utensils, bottles and nipples should be emphasized. Cleanliness should be the byword. The formula should not be too concentrated at first, but worked up gradually to the infant's tolerance. Overfeeding with fats and carbohydrates is especially dangerous as it may lead to vomiting and diarrhea. Conservatism in infant feeding is still preferred by most pediatricians. One should avoid the use of laxatives and purgatives which are often precipitating causes of diarrhea. Finally, such factors as proper clothing, adequate ventilation, boiling of drinking water, elimination of the housefly, avoidance of contact with parenteral infection, and good general hygiene, should be strongly stressed by the physician.

"The chief aim in the treatment of Acute Intestinal Indigestion, is to give the gastrointestinal tract needed rest. This 'splinting' of the bowel can be accomplished by withholding food for a variable period ranging from

12 to 24 hours, depending upon the severity of the vomiting and diarrhea. Cathartics and enemata, so often used in the past 'to clean out the system' have no legitimate place in the treatment of diarrhea. Following this starvation period, small increasing amounts of an easily tolerated formula, such as skimmed boiled milk mixture is offered. At times incorporating barley or rice water in the skimmed boiled milk is valuable. The majority of cases will respond to this simple regimen. Occasionally it is necessary to resort to an acidulated milk such as lactic acid or protein milk.

II. ALIMENTARY INTOXICATION OR TOXICOSIS

"This severe symptom complex has occupied the attention of pediatricians for many years. Yet, uncertainty still prevails concerning its etiology and pathological physiology. The infant presents the picture of severe toxemia and of circulatory collapse not unlike that of surgical or experimental shock. The skin is ashen-gray, the mucous membranes dry and cherry-red in color; the extremities are cold. The temperature is often subnormal. The fontanelle is depressed and the eyeballs sunken. There is loss of tissue turgor, indicative of marked dehydration. If treatment is not instituted early, even more serious symptoms develop. These are hyperpnea, or 'air-hunger,' indicative of acidosis; and oliguria, or complete anuria, due to functional impairment of the kidneys.

"Prophylaxis. Alimentary intoxication is often a preventable disease in the normal infant. Prevention is more difficult in the infant suffering from malnutrition, rickets and anemia, or in those born prematurely. Intelligent feeding, proper hygiene, and the correction of the above nutritional disturbances must be emphasized. Parenteral infection, which occurs so frequently in this disease, should be detected early, and adequately treated. One should consider a child with simple diarrhea a potential case of toxicosis, to be treated promptly. In order to prevent dehydration, it is essential to maintain an adequate fluid intake, particularly during hot weather, when there is so much fluid loss by skin and through the lungs.

"The most important single factor in reducing mortality from alimentary intoxication is the detection of its early symptoms. When a child with simple diarrhea shows the slightest loss of tissue turgor (dehydration), or shows the slightest 'toxicity,' it should be hospitalized immediately and treated adequately, with parenteral fluids. This will generally prevent the development of the more serious symptoms, such as oliguria, anuria, and acidosis.

TREATMENT OF ALIMENTARY INTOXICATION

"The chief objectives in the treatment of alimentary intoxication are the following:

"(1) Control of gastro-intestinal irritability: This is accomplished by a period of complete starvation, varying between 12 to 24 hours, depending on the amount of vomiting and diarrhea. Small amounts (1 to 2 dram doses) of water or weak tea are offered every 2 to 3 hours after the first 12 hours of starvation. When there is an improvement in the diarrhea and diminution in toxicity, small increasing amounts of formula are given.

"(2) Restoration of normal water balance: As a rule fluids by mouth cannot be given in large enough quantity to correct dehydration. It is best combated by giving fluids intravenously. Continuous intravenous injection (venoclysis) of 5% glucose in normal saline has been used successfully for this purpose. This is given slowly (6 to 10 drops per minute) through a Murphy tube and canula inserted into the vein. The use of 10% glucose intravenously, followed by normal saline subcutaneously, has also given satisfactory

results. Hartmann's solution, as well as Ringer's solution, have been used intravenously, with good results.

"(3) Relief of oliguria and anuria: Venoclysis of 5% glucose in normal saline, has been successful in reestablishment of normal kidney function. When oliguria or anuria persist in spite of this, it may be necessary to resort to higher concentrations of glucose, of from 15 to 25% solutions intravenously. These may prove to be more efficient diuretics.

"(4) Reestablishment of normal acid-base balance: Intravenous fluids as outlined above generally correct the existing disturbance in acid-base balance. Correction of oliguria and anuria often automatically corrects the existing acidosis. In a stubborn case of acidosis, it may be necessary to give additional alkali intravenously in the form of sodium bicarbonate solution or Hartmann's solution.

"(5) Treatment of parenteral infection: The infant should be examined frequently for infection. No treatment will avail, if the source of infection remains. Among the commonest infections encountered are rhinopharyngitis, otitis media, mastoiditis, and pyuria. Of special interest in this disease are purulent otitis and suppurative mastoiditis, both of which should be treated surgically early.

"Blood transfusion is an important adjunct in the treatment of toxicosis. Its value is no longer seriously questioned. The mechanism whereby it benefits is still obscure. Correction of anemia, improvement in nutrition of intestinal glands, and restoration of blood volume are some of the explanations. Where the hemoglobin is high, transfusion should be given with caution, or only after dilution with saline. The blood serum should be analyzed chemically at regular intervals, when facilities permit. The data thus obtained often form a valuable guide in the treatment and prognosis of the disease. However, one should not wait for gross chemical changes in the blood before introducing appropriate therapy. Such changes often lag behind clinical manifestations and indicate a well advanced stage of dehydration and toxicosis.

III. INFECTIOUS DIARRHEA (ILEOCOLITIS, DYSENTERY)

"This is an acute infectious disease caused by a specific organism, the Dysentery bacillus. Many strains have been described. The strain most frequently encountered in this country is the Flexner Harris bacillus. The Shiga bacillus is met with chiefly in the orient. Other organisms that have been described as causative agents are the Hiss-Russell bacillus, the Sonne bacillus, the Morgan and the Schwartz organisms. Their biologic identities rest on their ability or inability to ferment certain sugars. The symptoms in dysentery may vary from those of a mild upset to a severe toxemia. In the latter type, the onset is abrupt, with marked diarrhea, vomiting, fever and prostration. The stools are loose or watery and contain large amounts of mucus, pus and blood. Dehydration and acidosis may develop as complications. These symptoms are to be treated much the same way as alimentary intoxication.

"Since this is a definitely infectious disease, preventive measures and isolation are important in preventing its spread through a community. The dysentery bacilli are carried from the excreta of the patient to the mouth of the next individual. Therefore, the chief point in the epidemiology of the disease should be directed towards the prevention of the spreading of the infective agent. The chief agents in the transmission of the organism are still 'fingers, food and flies.' It is, therefore, absolutely essential to recognize the disease early and to isolate the patient as promptly as possible. All excreta should be thoroughly disinfected before disposal. All utensils and linen should be sterilized when taken from the patient. Screening is essen-

tial to avoid the 'fly hazard.' Thorough scrubbing of the hands by all directly or indirectly connected with the case is of utmost importance. In other words, a very strict isolation technique, such as is carried out in all contagious wards, should be insisted upon.

"The practice of home pasteurization of milk just before offering it to the infant has effected a material reduction in the incidence of dysentery."

COMMUNICABLE DISEASES REPORTED

Urban and Rural—December 3 - December 30, 1939

Chickenpox: Total 297—Winnipeg 98, Brandon 69, Unorganized 33, Kildonan East 17, Transcona 10, St. Vital 7, Brenda 5, Flin Flon 5, Kildonan West 4, Lawrence 4, Morris Rural 4, Rockwood 4, Montcalm 3, Oakland 3, Gilbert Plains Village 2, Gilbert Plains Rural 2, Kildonan Old 2, Louise 2, Miniota 2, Stonewall 2, Whitehead 2, Thompson 1, Virden 1, Wallace 1 (Late Reported: Brandon 4, Flin Flon 4, Stonewall 2, Unorganized 2, Louise 1, Rockwood 1).

Whooping Cough: Total 184—Winnipeg 70, Unorganized 32, St. Boniface 16, Brandon 8, Kildonan East 7, Kildonan West 5, Franklin 4, Flin Flon 3, Stanley 3, Lawrence 2, Oakland 2, Pilot Mound 2, St. Vital 2, Pembina 1, Transcona 1 (Late Reported: Unorganized 7, Brandon 4, Grandview Rural 4, Morton 3, Franklin 2, St. Clements 2, St. Andrews 1, De Salaberry 1, Flin Flon 1, St. Boniface 1).

Measles: Total 138—The Pas 40, Dufferin 31, Portage Rural 23, Unorganized 21, Winnipeg 6, Whittemouth 5, Brenda 3, Lorne 3, Beausejour 1, Brandon 1, Fort Garry 1, Kildonan West 1, Louise 1 (Late Reported: The Pas 1).

Scarlet Fever: Total 79—Winnipeg 49, St. Boniface 5, St. James 5, Brokenhead 2, Grandview Rural 2, Kildonan East 2, Rhineland 2, Transcona 2, Brandon 1, Charleswood 1, Gilbert Plains Village 1, Kildonan West 1, St. Vital 1, Swan River Rural 1, Unorganized 1, Turtle Mountain 1 (Late Reported: St. Boniface 2).

Diphtheria: Total 43—Winnipeg 35, Charleswood 1, Hanover 1, Kildonan East 1, Rhineland 1, Ste. Anne 1, St. Vital 1 (Late Reported: Dauphin Rural 1, Hanover 1).

Mumps: Total 35—Winnipeg 33, Lorne 1, Turtle Mountain 1.

Diphtheria Carriers: Total 19—Winnipeg 19.

Typhoid Fever: Total 12—Roblin Rural 6, Ste. Anne 1, Unorganized 1 (Late Reported: Hanover 3, Neepawa 1).

Influenza: Total 12—Winnipeg 1, Kildonan West 1 (Late Reported: Ellice 1, Gilbert Plains Rural 1, Gimli Rural 1, Grandview Rural 1, Lansdowne 1, Mossey River 1, Roland 1, Strathcona 1, Ste. Anne 1, Portage City 1).

Lobar Pneumonia: Total 12—Portage City 1 (Late Reported: Unorganized 2, Portage City 1, St. Clements 1, Woodlands 1, Hanover 1, Lac du Bonnet 1, Stanley 1, Brenda 1, Franklin 1, Wallace 1).

Erysipelas: Total 11—Winnipeg 7, Pilot Mound 1, Portage City 1, Shoal Lake Rural 1, Transcona 1.

Tuberculosis: Total 11—Winnipeg 10, Unorganized 1.

Tetanus: Total 2—Coldwell 1 (Late Reported: Morris Rural 1).

Anterior Poliomyelitis: Total 1—Brandon 1.

Cerebrospinal Meningitis: Total 1—(Late Reported: Morris Rural 1).

Puerperal Fever: Total 1—(Late Reported: Unorganized 1).

Typhoid Fever Carriers: Total 1—De Salaberry 1.

Venereal Disease: Total 115—Gonorrhoea 67, Syphilis 48 (for month of December).

DEATHS FROM ALL CAUSES IN MANITOBA For the Month of November, 1939

URBAN—Cancer 42, Pneumonia (other forms) 6, Tuberculosis 4, Influenza 3, Syphilis 2, Lethargic Encephalitis 1, Pneumonia Lobar 1, Whooping Cough 1, Cerebrospinal Meningitis 1, Septic Sore Throat 1, all others under one year 17, all other causes 150, Stillbirths 8. Total 237.

RURAL—Cancer 28, Tuberculosis 14, Pneumonia (other forms) 6, Pneumonia Lobar 4, Whooping Cough 4, Influenza 3, Diphtheria 1, Poliomyelitis 1, Scarlet Fever 1, Typhoid Fever 1, all others under one year 18, all other causes 149, Stillbirths 7. Total 237.

INDIAN—Tuberculosis 10, Pneumonia (other forms) 4, Diphtheria 1, Influenza 1, Pneumonia Lobar 1, Whooping Cough 1, all others under one year 2, all other causes 12. Total 32.

A NEW AND FORWARD STEP IN THE TREATMENT OF SYPHILIS

The December 16th issue of the Journal of the American Medical Association contains two articles, an editorial and a report of the acceptance of Sobisminol, a new bismuth product for the treatment of syphilis.

Sobisminol was developed by Hanzlik et al. and is marketed under license from Stanford University. It is available for both oral and hypodermic administration.

Given orally, Sobisminol Mass appears to have an anti-syphilitic effect comparable to that produced by Sobisminol Solution and other soluble compounds of bismuth administered parenterally.

It is well absorbed; usually well tolerated; produces few undesirable side actions and tends to eliminate some disadvantages attendant upon hypodermic administration.

Sobisminol Mass and Sobisminol Solution have been subjected to extensive pharmacologic and clinical study. The investigations indicate that these products have a wide margin of safety whether given orally or intramuscularly; that they are promptly absorbed with considerable uniformity; that bismuth is excreted at such rates and in such quantities as to indicate that while there is little accumulation of bismuth, the quantities retained are adequate for the systemic action of bismuth, including a sustained anti-syphilitic effect while the product is being administered.

Clinically, according to published reports, administration of Sobisminol Mass and Sobisminol Solution in recommended dosage is followed by a rapid (aver. 4-5 days) disappearance of Treponema Pallidum from surface lesions and rapid (aver. 10-12 days) involution of the lesions of early and benign late syphilis.

Sobisminol Mass has been administered orally daily for periods of many months without producing cumulative toxic effects. It can be used wherever bismuth therapy is indicated in the treatment of syphilis including its use with one of the arsenicals or in alternate courses with arsenicals according to the preference of the clinician.

Sobisminol under the Cutter and Lilly labels will be available in certain sections of the Dominion of Canada and under the Squibb label throughout. Squibb also has available a test kit which provides materials for checking urinary bismuth excretion. —Adv't.

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fæces and other organic matter. A 2% solution rapidly kills hæmolytic streptococci and B. Coli even in the presence of pus.

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In major and minor surgery, for preoperative skin disinfection, Tincture Metaphen is recommended. It is a tinted alcohol-acetone-aqueous solution and is the most concentrated of the Metaphen preparations. Tincture Metaphen produces a distinctive orange stain which clearly delineates the field of application—as a stain which may be washed from skin or linens with soap and water. Tincture Metaphen is supplied in 1-oz., 4-oz., 16-oz. and 1-gallon bottles.

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Current Medical Literature

"The Lancet" — December 30th, 1939

Electric-Convulsion Therapy of Schizophrenia. By G. W. T. H. Fleming, M.R.C.S., D.P.M. Physician Superintendent of Barnwood House, Gloucester; F. L. Golla, M.B., Oxfd., F.R.C.P.; and W. Grey Walter, M.A., Camb. (From the Burden Neurological Institute and Barnwood House Mental Hospital, Gloucester).

The Dark-Adaptation Test: Its Reliability as a Test for Vitamin A Deficiency. By Leslie J. Harris, Sc.D., D.Sc., Ph.D., F.I.C.; and M. A. Abbasy, Ph.D., M.B. Now lecturer in Nutrition, Department of Hygiene and Preventive Medicine, University of Cairo. (From the Nutritional Laboratory, University of Cambridge and Medical Research Council). Concluded from p. 1305.

Pernicious Anaemia in Egypt. By S. Azmy Pasha, M.D., Cairo, F.R.C.P. Professor of the Post-graduate section of Medicine, Cairo; and A. F. Zanaty, M.B., Cairo, D.T.M. & H., M.R.C.P. Lecturer on Haematology, Royal Faculty of Medicine, Cairo.

Clinical Use of Triphenylchloroethylene. By A. I. S. MacPherson, M.B., Edin. Gynaecological and Obstetrical House-Surgeon at the Royal Infirmary, Edinburgh; and Edwin M. Robertson, M.B., Edin., F.R.C.S.E., M.R.C.O.G. Junior Assistant Gynaecologist and Obstetrician to the Infirmary; Assistant Gynaecologist to the Western General Hospital and Leith Hospital, Edinburgh.

Pemphigus Neonatorum Treated with Sulphapyridine (M. & B. 693). By Arthur G. Troup, M.D., Aberd., D.P.H. Medical Superintendent of Willesden Municipal Hospital; and Robert M. White, M.B., Edin., D.P.H. Resident Medical Officer at the Hospital.

Agranulocytosis Complicating Treatment of Acute Pemphigus with M. & B. 693. By David Erskine, M.D., Lond., D.P.H. Dermatologist at the Seamen's Dreadnought Hospital, Greenwich; and J. E. Royds, M.B., St. And. House Physician at the Hospital.

Otosclerosis Treated with Sex Hormones. By J. Bernstein, M.B., Leeds, F.R.C.S.E., D.L.O. Aural Surgeon at the Eye, Ear and Throat Infirmary, Liverpool; and Leon Gillis, M.B., Witwatersrand, M.Ch., Lpool.

Redistribution of Abnormal Foot Pressure. By M. S. Holman, M.B., Lond. Surgical Officer in Charge of the Foot Clinic at the Birmingham General Dispensary.

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"The Practitioner" — January, 1940

The Use and Abuse of Chemotherapeutic Agents of the Sulphonamide Group. Introduction. By L. E. H. Whitby, C.V.O., M.D., F.R.C.P. Assistant Pathologist, Middlesex Hospital.

Nomenclature of Modern Chemotherapeutic Drugs. By W. K. Fitch. Editor, The Pharmaceutical Journal.

Uses and Abuses of Chemotherapy in Streptococcal Diseases. By W. R. Snodgrass, M.D., B.Sc., F.R.F.P.S. Physician, Southern General Hospital, Glasgow; Assistant Physician, Western Infirmary, Glasgow.

Modern Chemotherapy and Meningococcal Infections. By F. G. Hobson, D.S.O., D.M., F.R.C.P. Physician Radcliffe Infirmary, Oxford.

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Chemotherapy and Acute Specific Fevers. By A. R. Thompson, M.D., D.P.H. Deputy Medical Superintendent, South-Eastern Fever Hospital, London County Council.

Affections of the Heart in Time of War. By R. O. Moon, D.M., F.R.C.P. Consulting Physician, Western General Dispensary, Marylebone, Hospital for Diseases of the Heart and Royal Waterloo Hospital.

Swellings and Sinuses in the Neck in Childhood. By Charles Donald, Ch.M., F.R.C.S. Assistant Surgeon, London Hospital, and the Hospital for Sick Children, Great Ormond Street.

The Indications for and Technique of Whole-Blood Injections. By Christopher Hardwick, M.B., B.Chir., M.R.C.P., D.C.H. Medical Registrar, Middlesex Hospital.

Modern Therapeutics. VII.—Metallic Compounds. By G. M. Findlay, C.B.E., M.D., D.Sc. Wellcome Bureau of Scientific Research, London.

"The Clinical Journal" — January, 1940

The Treatment of Pyosalpinx. By W. F. T. Haultain, O.B.E., M.C., B.A., M.B., B.Ch., Cantab., F.R.C.S., Edin., M.R.C.P., Edin., F.R.C.O.G. Gynaecologist, Royal Infirmary, Edinburgh.

Diphtheritic Infection of the Umbilicus. By A. R. Thompson, M.D., M.R.C.S., D.P.H. Deputy Medical Superintendent, Infectious Hospitals Service, London County Council.

The Differential Diagnosis and Treatment of Ureteric Calculi. By E. Catherine Lewis, M.S., F.R.C.S. Surgeon, Royal Free Hospital.

Stilboestrol Treatment of the Climateric. By H. R. Donald, M.A., B.M., M.R.C.P. Honorary Physician, Manchester Northern Hospital.

"The Clinical Journal" — December, 1939

Anorexia Nervosa. By John A. Ryle, M.D., F.R.C.P., Regius Professor of Medicine in the University of Cambridge; Consulting Physician, Guy's Hospital.

The Boot on the Wrong Foot. By W. Sayle Creer, M.Ch., Orth., F.R.C.S. Orthopaedic Registrar, Salford Royal Hospital; Surgeon i/c Fractures, Ashton-under-Lyne.

The Sulphonamide Group of Drugs in Obstetrics. By Bryan Williams, M.D., M.R.C.O.G., F.R.C.S., Ed. Senior Assistant Medical Officer, Walton Hospital.

Lacerated Wound of the Abdomen with Protrusion of Intestine the Result of a Fall. By Lambert Rogers, F.R.C.S. Honorary Surgeon and Director of the Surgical Unit, Royal Infirmary, Cardiff.

"British Medical Journal" — December 30th, 1939

The Painful Shoulder. By Philip D. Wilson, M.D. New York City. (with Special Plate).

Treatment of Haemorrhoids. By W. B. Gabriel, M.S., F.R.C.S. Surgeon, Royal Northern and St. Mark's Hospitals. (with Special Plate).

Electrically Induced Convulsions in Treatment of Mental Disorders. By Wm. H. Shepley, M.B., Ch.B., D.P.M. Senior Assistant Medical Officer, Warlingham Park Hospital; and J. S. McGregor, M.B., Ch.B. Assistant Medical Officer, Warlingham Park Hospital. (with Special Plate).

Treatment of Otorrhoea by Argyrol Displacement. By W. Ogilvy Reid, M.A., B.Sc., M.B., F.R.C.S., Ed. Deputy Medical Superintendent, Downs Hospital (L.C.C.), Sutton, Surrey.

Acute Torsion of the Gall Bladder. By A. H. Barber, M.A., M.B., M.R.C.P., F.R.C.S. Late Lecturer in Anatomy in the University of Birmingham.

Fractures Round the Ankle Joint. By Eric I. Lloyd, M.B., B.Ch., F.R.C.S.

National Emergency (Continued)

service which should be a guarantee to all concerned of the widest possible utilization of our services. Furthermore, the arrangement should also serve as a reminder to every medical practitioner in Canada of the desirability of strengthening the bonds of organized medicine to the place where the Canadian Medical Association will represent not 50 or 60 per cent. of the medical practitioners of the country but 100 per cent.

At its meeting on Saturday, November 4th, the Canadian Medical Advisory Committee dealt with correspondence emanating from the Department of Pensions and National Health inquiring if the Committee felt it would be desirable that detailed

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Journal, N.S. (IVth) Vol. XLV., 1938.

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information on the giving of first aid to victims of gas and incendiary bombs be provided to the medical profession of Canada.

After giving this matter careful consideration the Committee instructed that reply be made to the Government of Canada as per resolution herewith:

"That, within those parts of Canada in which the Government sees fit to organize Air Raid Committees, we would suggest that the instructional booklets be distributed, covering the medical profession of such areas."

The Committee felt that the Association should be ready to give publicity to this matter in an appropriate manner. With this end in view, the following resolution was passed with instruction that it be forwarded to the Editor:

"That, whereas it has been brought to our attention by the Department of Pensions and National Health that consideration should be given to the possibility of the dropping of incendiary and gas bombs in parts of Canada, this Committee recommends to the Editorial Board that consideration be given to having available for publication in the *Journal of the Canadian Medical Association* and also in *L'Union Medicale*, an article dealing with first-aid in such cases."

The following is a copy of a resolution passed at the meeting of the Canadian Medical Advisory Committee on November 20th, which, the Committee requested should be published in the *Journal*:

Re MEMBERSHIP FEES OF DOCTORS WHO ENLIST

That during the progress of the war in which Canada is now engaged, this Canadian Medical Advisory Committee recommends that the membership in the Canadian Medical Association of doctors who proceed overseas on active service in the army, in any branch of the service, shall be continued in good standing without the payment of any fee, this to take effect at the expiration of the last calendar year for which the fee has been paid; but that, unless specifically requested by the doctor so carried, the *Journal* shall not be sent to such doctor during the period of his absence from Canada.

T. C. ROUTLEY,
General Secretary

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